

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Amendments to Specification and Claims

The specification has been revised to correct various minor grammatical and idiomatic errors.

In addition, claim 1 has been amended to positively recite that the voltage-stabilizing control unit **detects** whether the voltage is sufficient low for supply to the motor drive circuit, and **cuts off** the voltage-stabilizing unit is the voltage is a high voltage, as described for example in lines 12-20 on page 8 and lines 3-12 on page 10 of the original specification.

Because the changes are all formal in nature and/or clearly supported by the original specification, it is respectfully submitted that the changes do not involve new matter.

2. Rejection of Claims 1-8 Under 35 USC §102(b) in view of U.S. Patent No. 4,329,630 (Park)

This rejection is respectfully traversed on the grounds that the Park patent does not disclose or suggest an ac-dc conversion circuit for a brushless dc motor in which:

- voltage supplied by a rectifier is passed through a “voltage-stabilizing unit” arranged to cut off dc voltage to the motor; and
- the “voltage-stabilizing unit” is controlled by a “voltage-stabilizing control unit” that **detects the voltage** supplied by the rectifier and controls the “voltage-stabilizing unit” to **cut off** voltage supply when a **high** dc voltage is detected and to **only** permit supply of dc voltage when the dc voltage is a **low** dc voltage.

While the circuit of Park includes a transistor Q1 controlled to pass and cut off voltage supplied to the motor, the transistor Q1 is not controlled by a “voltage-stabilizing control unit”

that controls transistor Q1 based on whether the voltage is sufficiently low, as recited in claim 1, much less based on comparison of the supplied voltage with a reference voltage using an **op amp** comparator as recited in claim 8.

Instead of being controlled by a *voltage detector*, as claimed, transistor Q1 of Park is controlled by a duty cycle power control using base drive circuit 40. Base drive circuit 40 does not detect whether the supplied voltage is high or low, but rather serves as a high frequency pulse width modulator to achieve a desired motor speed or special effects such as agitation and spin. **Base drive circuit 40 of Park does not detect a level of voltage supplied by the rectifier 26, and in fact is not even connected to the rectifier.** Therefore, base drive circuit 40 of Park clearly does not correspond to the claimed voltage-stabilizing control circuit, and the Park patent does not anticipate the claimed circuit.

3. Rejection of Claim 9 Under 35 USC §102(b) in view of U.S. Patent Nos. 4,329,630 (Park) and 5,606,232 (Harlan)

This rejection is respectfully traversed on the grounds that Harlan patent, like the Park patent, does not disclose or suggest an ac-dc conversion circuit for a brushless dc motor in which voltage supplied by a rectifier is passed through a “**voltage-stabilizing unit**” arranged to cut off dc voltage to the motor; and the “voltage-stabilizing unit” is controlled by a “**voltage-stabilizing control unit**” that detects the voltage supplied by the rectifier and controls the “voltage-stabilizing unit” to cut off voltage supply when a high dc voltage is detected and to only permit supply of dc voltage when the dc voltage is a low dc voltage.

The Harlan patent discloses a dc motor drive circuit with a rectifier and a driver circuit “*controlled by standard commutation circuitry*” (see the abstract of the Harlan patent), plus a line filter for removing input power surges and a speed control circuit. The circuit of Harlan does not cut off the supply of dc voltage to a motor drive circuit, as recited in claim 1. Instead, MOSFET 262 of Harlan is part of a line filter circuit 258 that controls charging of a capacitor during each half-wave cycle of the rectifier output. The operation of MOSFET 262 can be understood from

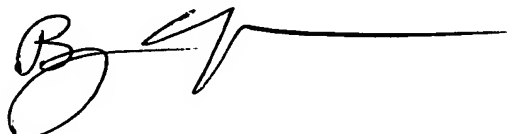
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the description of switch 54 in col. 4, line 1-23 of the Harlan patent, which explains how the switch 54 opens and closes depending on the voltage across the output capacitor (as opposed to the voltage output of the full-wave bridge rectifier), so that the switch causes the capacitor to charge and discharge between a predetermined value of +30 volts and +36 volts (see also, col. 4, lines 47 *et seq.* of the Harlan patent. MOSFET 262 of Harlan therefore controls a capacitor to achieve line filtering and does not correspond to the claimed MOSFET. As a result, neither the Park patent nor the Harlan patent, whether considered individually or in any reasonable combination, could have suggested the claimed invention, and withdrawal of the rejection of claim 9 under 35 USC §103(a) is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

BACON & THOMAS, PLLC

A handwritten signature in black ink, appearing to be 'B. Urcia', with a long horizontal line extending to the right.

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